CROSSING SAFETY IMPROVEMENT PROGRAM

FY 2003 – 2007

PROPOSED GRADE CROSSING PROTECTION FUND PROJECTS FOR LOCAL ROADS AND STREETS

ILLINOIS COMMERCE COMMISSION
MAY, 2002

INTRODUCTION

The Illinois Commerce Commission has the statutory responsibility to improve safety at public railroad/highway crossings in the State of Illinois. Currently, there are 10,982 public highway/rail crossings in the State. Of these, 8,327 are at-grade crossings, with 869 located on state highways and 7,458 located on local roads and streets. Illinois also has 2,655 grade separated (bridge) crossings. Another 5,075 grade crossings are located on private property, and thus are not under the jurisdiction of the State. The same is true for 166 private bridge structures. Nationally, Illinois is second only to Texas in the total number of highway/rail crossings.

In carrying out its mandated responsibility, the Commission orders improvements on public highway/rail crossings that it determines to be in the interest of public safety. The costs of these ordered improvements are borne by the state, the railroads, and local governments. On state roads, the Illinois Department of Transportation (IDOT) pays the majority of the costs through the State Road Fund. For local roads, the majority of the improvement costs are funded through the Grade Crossing Protection Fund (Fund).

The Commission's Rail Safety Section has 25 staff members who are responsible for all aspects of rail safety in Illinois. The Rail Safety Section's functions, among other things, include:

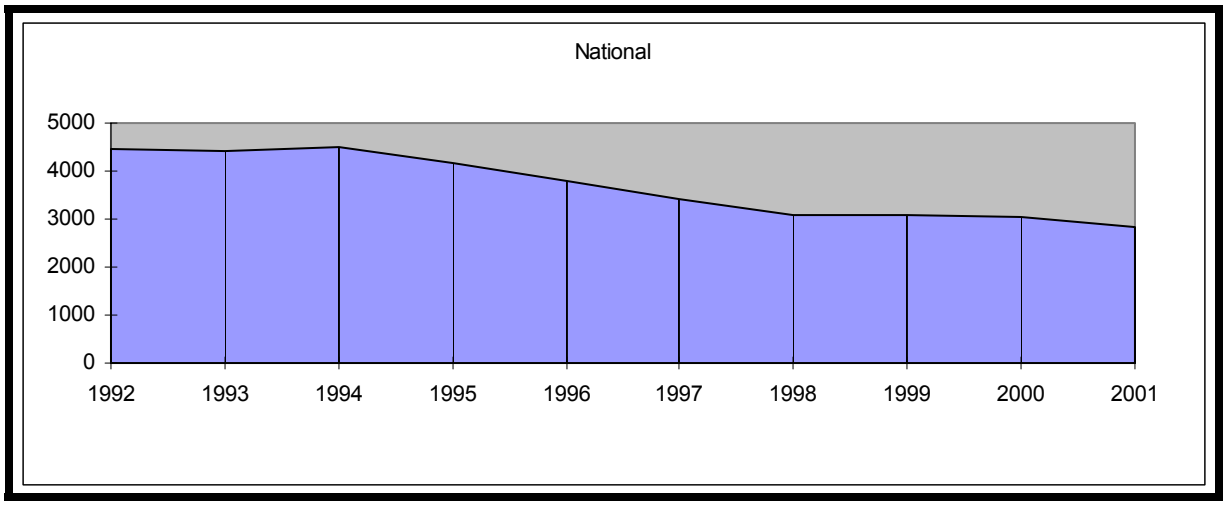
- Management of Grade Crossing Protection Fund safety projects;
- Engineering oversight of all improvements and/or modifications to the State's 10,982 public highway/rail crossings;
- Inspection of all railroad track in the State for defects which could cause train derailments;
- Oversight of all railroad hazardous material shipments throughout the State, including radioactive waste and spent nuclear fuel;
- Engineering oversight of all improvements/modifications to highway traffic signal systems interconnected with railroad warning devices;
- Implementation of Illinois' Operation Lifesaver public education campaign
- Investigation of highway/rail collisions and other rail related accidents/incidents that occur in Illinois.

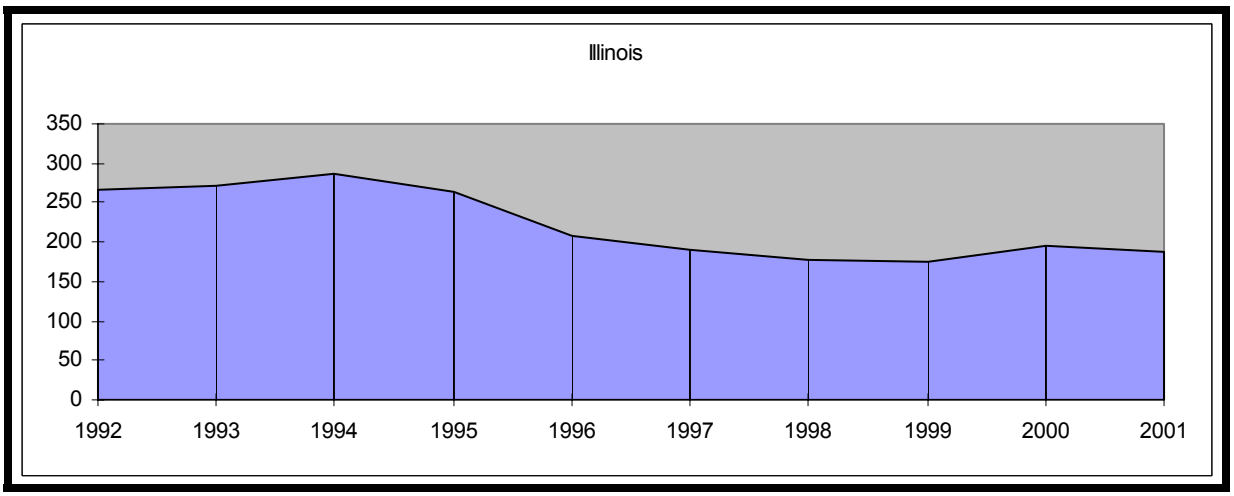
Over the years the Commerce Commission's staff members have used their expertise in the development of improved rail safety standards at both the state and national levels.

2001 IN REVIEW

Collision and Fatality Rates

In 2001, there were a total of 188 collisions at public crossings in Illinois, an improvement over 2000 when there were 195. This 4% reduction is consistent with preliminary national figures that showed a 6.5% decline. There were 2,835[1] collisions nationally during 2001. As can be seen from the following charts, the trend both nationally and in Illinois is a steady decrease in collisions.





The general public commonly thinks of grade crossing collisions as involving trains colliding with cars, and in a majority of incidents, that is the case. However, each year a substantial number of collisions involve motor vehicles driving into the sides of moving trains. In 2001, 25% of all collisions involved cars driving into the sides of

trains, a percentage which has remained fairly constant over the years. The 47 vehicle-train collisions in 2001 resulted in six fatalities and 19 injuries.

Total fatalities resulting from collisions at highway-rail crossings in Illinois increased slightly from 27 in 2000 to 29 in 2001. Fatality statistics, however, are not a particularly good measure of safety threats or conditions. Collision related fatalities are in fact a function of random events, such the number of occupants riding in a vehicle involved in a collision, or multiple fatalities involved in a single incident (as in the death of eleven passengers involved in the Amtrak/steel truck collision that occurred near Bourbonnais in 1999). Table A illustrates the distribution of fatalities by collision type in 2001.

TABLE A
2001 Highway-Rail Collisions and Fatalities by Type

COLLISION TYPE	TOTAL COLLISIONS	FATAL COLLISIONS	TOTAL FATALITIES
Pedestrian	16	13	13
Train-Vehicle	125	8	10
Vehicle-Train	47	5	6
	188	26	29

RAILROAD CROSSING SAFETY FUNDING

The Grade Crossing Protection Fund was created by the General Assembly to assist local jurisdictions (counties, townships and municipalities) in paying for safety improvements at railroad crossings on local roads. Monies from the Fund are appropriated to the Illinois Department of Transportation, but administered by the Illinois Commerce Commission. They may not be used for crossing safety improvements on the state road or highway system; state road improvements are funded directly by the Illinois Department of Transportation. Each month $2.25 million in state motor fuel tax receipts is transferred from the Motor Fuel Tax Fund to the Grade Crossing Protection Fund. This amount, which includes an additional $9 million in annual funding received under Governor Ryan's Illinois FIRST initiative, provides $27 million annually to be used for local crossing safety improvements. The Fund is used to help pay for engineering and inspection activities of Commission rail safety staff, as well as provide capital funding for the following types of projects:

- **Warning device upgrades:** Installation of automatic flashing light signals and/or gates and/or signal circuitry improvements at existing at-grade crossings;
- **Grade separations - new and reconstructed:** Construction/reconstruction/repair of a highway over or under railroad tracks;

- **Grade separations - vertical clearances:** Lowering the highway pavement surface under a railroad underpass to improve vertical clearance for motor vehicles;
- **Interconnects:** Upgrading the circuitry at grade crossings where warning signals are connected to the adjacent traffic signals so that the two systems operate in a synchronized manner;
- **Approaches:** Improvements to the portion of the public roadway directly adjacent to the crossing surface;
- **Connecting roads:** Construction of a roadway between a closed crossing and an adjacent open, improved crossing; and
- **Remote monitoring devices:** Sensor devices in the circuitry of grade crossing warning devices which immediately alert the railroad to any failures in warning device operations.

The cost of railroad crossing safety improvements varies substantially depending on the nature of the work undertaken. A standard installation of gates with automatic flashing light signals on a two-lane road costs approximately $150,000. Additional costs for road improvements could typically range from $2,000 to $25,000 depending on the road type and location. Grade separation structures are very costly. A pavement lowering project can cost from $350,000 to $1 million, while a new underpass could cost as much as $10 million. Bridges over railroads can cost from $400,000 for a rural structure to $40 million for a multi-lane multi-railroad urban structure.

Ordinarily, the Fund pays up to 60% of the cost for grade separation projects and 85% to 95% for grade crossing improvements, although Commission's policy is to allocate no more than $12 million of Grade Crossing Protection Funds to any individual project unless warranted by unusual circumstances. When these costs are multiplied by the number of crossings needing improvement, the problem of allocating funds becomes apparent.

CROSSING SAFETY IMPROVEMENT PROJECTS

This report presents the railroad crossing safety capital improvements that Commerce Commission staff proposes to implement during FY 2003 and also looks ahead to the projects contemplated for the years FY 2004 - FY 2007. In all cases it is assumed that any required local funding match will be available. In some cases local funding is not available, and in those circumstances the Commission will move the project to another fiscal year.

The project list for Fiscal Year 2003 (July 1, 2002, through June 30, 2003) includes capital improvement projects that local governments or railroads have previously submitted to the Commission for evaluation and approval, as well as projects selected based on established priorities. The project list for FY 2004-2007 (out-year list) include projects based on a continued effort to meet those established priorities:

- High Speed Rail - A priority over the next several years will be to continue efforts to ensure that adequate and appropriate warning is provided for all public highway/rail grade crossings in the Chicago - St. Louis rail corridor, which IDOT has selected for operation of high speed passenger trains (train speeds up to 110 mph). The Commission is committed to providing substantial funding from the Grade Crossing Protection Fund to assist IDOT in improving crossing warnings systems over the next several years.

- Rail Corridors - The Commission has identified as a priority the need to improve public highway/rail grade crossings in rail corridors where conventional speed passenger trains operate.

- High Collision History - Each year the Commission places a high priority on upgrading public highway/rail grade crossings which have a pronounced history of train/vehicle collisions or which have a high predictive value for future collisions. This five-year Program will address as many of these crossing locations as possible.

- Highway and Pedestrian Grade Separations (Bridges) - The Commission is continually seeking locations where grade crossing blockages cause substantial motorist or emergency vehicle delay, or where heavy vehicular traffic represents a heightened threat of train/vehicle collisions. This Program includes funding assistance for numerous highway bridge projects throughout the state. Recently, the General Assembly gave the Commission authority to utilize the Grade Crossing Protection Fund to assist local communities with the cost of constructing pedestrian grade separations in areas where it is necessary to improve safety. This Program includes funding assistance for several pedway bridge projects throughout the state.

- Interconnected Crossings - The Commission and IDOT are continuing a program to identify and improve highway/rail grade crossings that require the interconnection of crossing warning signals with traffic control signals at adjacent highway intersections.

Program Note: *On January 13, 2000, the Federal Railroad Administration (FRA) issued a Notice of Proposed Rulemaking to implement the 1994 Swift Rail Act. This federal law and proposed rule would require that all trains sound their horns at all grade crossings, unless supplemental safety measures are installed at those crossings. It is anticipated that the FRA may issue its rule sometime during calendar year 2002. Depending on the outcome of the rulemaking, the program themes articulated here could be revised. The Commission anticipates enactment of the Train Horn Rule would create an increased level of requests for GCPF assistance from local communities to help pay for crossing safety improvements required to create qualified Quiet Zones.*

FY 2003 PLAN

Projects expected to be submitted to the Commission in FY 2003 are listed in Appendix 1. In FY 2003 it is anticipated the Commission will consider projects requiring commitments from the Grade Crossing Protection Fund totaling almost $42 million, including over $26 million for crossing separations.

In FY 2003, the Commission will also set aside approximately $3 million in contingency funds to address emergency projects, which may require rapid resolution, and experimental crossing safety projects. These projects are summarized in Table B.

TABLE B
FY 2003 Projects by Project Type
Total Estimated Grade Crossing Protection Fund Cost

PROJECT TYPE	CROSSINGS	$MILLIONS
Bridge Projects	8	26.3
Grade Crossing Improvement Projects	91	10.7
Remote Monitors	652	1.9
Experimental/Emergency Safety Improvements	N/A	3.0
TOTAL	**751**	**41.9**

FY 2004 - 2007 PLAN

Projects expected to be submitted to the Commission in FY 2004-2007 are listed in Appendix 2. For those four years, it is anticipated the Commission will consider projects requiring commitments from the Grade Crossing Protection Fund totaling over $105 million, affecting more than 1,890 crossings in 93 counties.

TABLE C
FY 2004-7 Projects by Project Type
Total Estimated Grade Crossing Protection Fund Cost

PROJECT TYPE	CROSSINGS	$MILLIONS
Bridge Projects	28	74.9
Grade Crossing Improvement Projects	135	19.2
Remote Monitors	1,726	5.5
Interconnects	1	0.1
Experimental/Emergency Safety Improvements	N/A	6.0
Total	**1,890**	**105.7**

ACTIVE PROJECTS

There are currently 101 active improvement projects involving over 1,800 crossings in 78 counties throughout the state. These projects are summarized in Table D below. Appendix 3 lists each individual project with specific location and cost information.

TABLE D
Active Projects by Project Type
Total Estimated Grade Crossing Protection Fund Cost

PROJECT TYPE	CROSSINGS	$MILLIONS
Bridge Projects	23	55.4
Grade Crossing Improvement Projects	155	24.2
Remote Monitors	1,649	3.9
Interconnects	10	4.0
Experimental/Emergency Safety Improvements (e.g., Video Enforcement, Automatic Horn System, Vehicle Detection)	10	0.7
Total	**1,847**	**88.2**

NOTES:
1. “National” figures furnished by the Federal Railroad Administration are preliminary for CY 2001.